

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
23 June 2005 (23.06.2005)

PCT

(10) International Publication Number
WO 2005/056769 A3

(51) International Patent Classification⁷: A01N 63/00, 65/00

(21) International Application Number: PCT/US2004/041282

(22) International Filing Date: 9 December 2004 (09.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/528,140	9 December 2003 (09.12.2003)	US
60/559,259	2 April 2004 (02.04.2004)	US
60/573,517	22 May 2004 (22.05.2004)	US
60/610,474	16 September 2004 (16.09.2004)	US

(71) Applicant (for all designated States except US): AVANT IMMUNOTHERAPEUTICS, INC. [US/US]; 119 Fourth Avenue, Needham, MA 02494 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): SIZEMORE, Donald [US/US]; 2027 Twin Flower Circle, Grove City, OH 43123 (US). TINGE, Steven, A. [US/US]; 101 Windy Hill Drive, Lebanon, IL 62254 (US). KILLEEN, Kevin, P. [US/US]; 1112 Brook Road, Milton, MA 02186 (US).

(74) Agents: YANKWICH, Leon, R. et al.; Yankwich & Associates, 201 Broadway, Cambridge, MA 02139 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations
- of inventorship (Rule 4.17(iv)) for US only

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report: 13 October 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/056769 A3

(54) Title: ORALLY-ADMINISTERED LIVE BACTERIAL VACCINES FOR PLAGUE

(57) Abstract: The invention provides live, attenuated *Salmonella* bacterial strains that express one or more plague antigens of *Yersinia pestis* for use in live vaccine compositions that can be orally administered to an individual to protect against plague.